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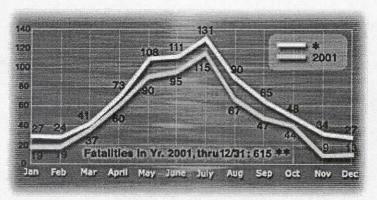








Recreational Boating Fatalities Are Decreasing!



- The statistics are based on the average number of monthly fatalities for the period 1995 - 2001.
- Preliminary figures based on 40 states and 1 territory reporting.

Yet Another life Claimed By That SILENT KILLER As New Boating Fad Opens The Door To Carbon Monoxide Lethal Dangers

COAST GUARD RECALLS HOUSEBOATS DUE TO CARBON MONOXIDE HAZARD AND CAUTIONS OWNERS/OPERATORS ON DANGERS

Click **here** for the US Coast Guard yearly fatalities statistics.

Learn more about boating safety and survival by reading this months featured survival story: Take Two Watercrafts and Some Flares.

We would appreciate your comments and suggestions so that we may provide you with the information you need to be a well informed boater. Please contact the **The Boating Safety Webmaster** with your comments and suggestions!

Click **here** for the US Coast Guard Disclaimer, Limitation of Liability and Privacy Notice.

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Federal Requirements

Equipment Requirements - Safety and Survival Tips

Be Safe on the Water

Know the navigation rules, observe the courtesies of safe boating and

KNOW ...

your	Boat
the	Equipment on the boat
the	Safety devices and wear PFDs
about	Alcohol and other distress stressors
about	First aid and emergency procedures
the	Environment, area and weather

.....BEFORE YOU GO!

Boating Safety is no accident. To build sound knowledge, proficiency and confidence, the keys to safe boating, take a boating safety course.

For more information on boating safety and boating courses, contact your State Boating Agency, Coast Guard Auxiliary, US Power Squadron, Coast Guard District or call the Boating Safety Infoline (1-800-368-5647). For information on boating courses you can also call the Boat/US course line (1-800-336-2628) and in Virginia (1-800-245-2628).

Take Time to Reflect on Safety Safe Boating Begins Here... with You!

Conversion of Metric to U.S. Units

Metric Measure	Feet in Decimals	Feet and Inches	
50.0 Meters (M)	164.0 ft.	164' 1/2"	
20.0 M	65.6 ft.	65'7 1/2"	
12.0 M	39.4 ft.	39'4 1/2"	
10.0 M	32.8 ft.	32'9 3/4"	
8.0 M	26.3 ft.	26'3"	
7.0 M	23.0 ft.	23'11 1/2"	
6.0 M	19.7 ft.	19'8 1/4"	
5.0 M	16.4 ft.	16'4 3/4"	
4.0 M	13.1 ft.	13'1 1/2"	
2.5 M	8.2 ft.	8'2 1/2"	
1.0 M	3.3 ft.	3'3 1/3"	

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WEAR YOUR LIFE JACKET! 2001 Recreational Boating Accident Statistics now available

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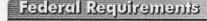
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Equipment Requirements - Safety and Survival Tips

Operator's Responsibilites Overloading Anchoring

Fueling Precautions Float Plan

Propeller Blades Warning

Weather



Operator's Responsibilites

Your water fun depends on you, your equipment and other people who, like yourself, enjoy spending leisure time on, in or near the water. Let's take a look at your responsibilities:

- Make sure the boat is in top operating condition and that there are no tripping hazards. The boat should be free of fire hazards and have clean bilges.
- Safety equipment, required by law, is on board, maintained in good condition, and you know how to properly use these devices.
- File a float plan with a relative or friend.
- Have a complete knowledge of the operation and handling characteristics of your boat.
- Know your position and know where you are going.
- Maintain a safe speed at all times to avoid collision.
- Keep an eye out for changing weather conditions, and act accordingly.
- Know and practice the Rules of the Road (Navigational Rules).
- Know and obey Federal and state regulations and waterway markers.
- Maintain a clear, unobstructed view forward at all times. "Scan" the water back and forth; avoid "tunnel" vision. Most boating collisions are caused by inattention.

You are the key to water safety!



Overloading

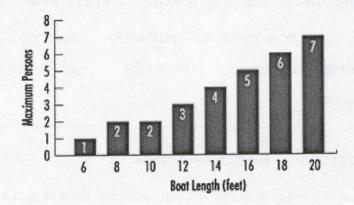
Never overload your boat with passengers and cargo beyond its safe carrying capacity. Too many people and/or gear will cause the boat to become unstable. Always balance the load so that the boat maintains proper trim. Here are some things to remember when loading your boat:

- Distribute the load evenly fore and aft and from side to side.
- Keep the load low.
- Keep passengers seated (Do not stand up in a small boat!).

Fasten gear to prevent shifting.

■ Do not exceed the "U.S. Coast Guard Maximum Capacities" information label (commonly called the Capacity Plate).

■ If there is no capacity plate, use the following chart as a guide to determine the maximum number of persons you can safely carry in calm weather. The chart is applicable only to mono-hull boats less than 20ft in length. A mono-hull is a boat, which makes a single "footprint" in the water when loaded to its rated capacity. For example, a catamaran, trimaran, or a pontoon boat is not a mono-hull boat.



Anchoring

Anchoring is done for two principal reasons: first, to stop for fishing, swimming, lunch, or an overnight stay and secondly, to keep you from running aground in bad weather or as a result of engine failure. Anchoring can be a simple task if you follow these guidelines:

 Make sure you have the proper type of anchor (danforth/plow/mushroom).

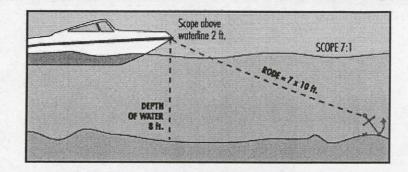
■ A three to six foot length of galvanized chain should be attached to the anchor. The chain will stand up to the abrasion of sand, rock or mud on the bottom much better than a fiber line.

A suitable length of nylon anchor line should be attached to the end of the chain (this combination is called the "Rode"). The nylon will stretch under heavy strain cushioning the impact of the waves or wind on the boat and the anchor.

 Select an area that offers maximum shelter from wind, current and boat traffic.

 Determine depth of water and type of bottom (preferably sand or mud).

Calculate the amount of anchor line you will need. General rule: 5 to 7 times as much anchor line as the depth of water plus the distance from the water to where the anchor will attach to the bow. For example, if the water depth is 8 feet and it is 2 feet from the top of water to your bow cleat, you would multiply 10 feet by 5 to 7 to get the amount of anchor line to put out (See diagram below).



- Secure the anchor line to the bow cleat at the point you want it to stop.
- Bring the bow of the vessel into the wind or current.
- When you get to the spot you want to anchor, place the engine in neutral.
- When the boat comes to a stop, slowly lower the anchor. Do not throw the anchor over, as it will tend to entangle the anchor.
- When all anchor line has been let out, back down on the anchor with engine in idle reverse to help set the anchor.
- When anchor is firmly set, use reference points (landmarks) in relation to the boat to make sure you are not drifting. Check these points frequently.

Do not anchor by the Stern!!

Anchoring a small boat by the stern has caused many to capsize and sink. The transom is usually squared off and has less freeboard than the bow. In a current, the force of the water can pull the stern under. The boat is also vulnerable to swamping by wave action. The weight of a motor, fuel tank, or other gear in the stern increases the risk.

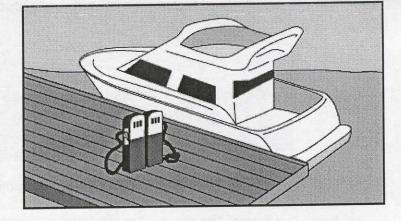


Fueling Precautions



Most fires and explosions happen during or after fueling. To prevent an accident follow these rules:

- Portable tanks should be refueled ashore.
- Close all hatches and other openings before fueling.
- Extinguish all smoking materials.
- Turn off engines, all electrical equipment, radios, stoves and other appliances.
- Remove all passengers.
- Keep the fill nozzle in contact with the tank and wipe up any spilled fuel.
- Open all ports, hatches and doors to ventilate.
- Run the blower for at least four minutes.
- Check the bilges for fuel vapors before starting the engine.
- Do the "sniff test". Sniff around to make sure there is no odor of gasoline anywhere in the boat.



Do not start the engine until all traces of fuel vapors are eliminated.

Fuel Management

Practice the "One-Third Rule" by using:

- One-third of the fuel going out
- One-third to get back and
- One-third in reserve



Float Plan

Play it safe, keep a stack a float plan forms on hand. Leave a copy with a friend, relative or local marina before heading out on the water. In case of an emergency, pertinent information will be right at their fingertips to enable them to contact the local marine police or Coast Guard with necessary details. A word of caution-in case you're delayed, and it's not an emergency, inform those with your float plan, and be sure to notify them when you return so the float plan can be "closed out" and an unnecessary and costly search avoided. A sample Float Plan is provided.

Propellor Blades Warning

Never forget the danger that boat propellors can inflict to persons in the water. Statistics indicate the most propellor injuries and fatalities involve open motorboats 16 to less than 26 feet in length and are due to operator inattention, inexperience, and carelessness. Remember to shut off your engines when approaching swimmers. When engines are running, alert swimmers to stay clear of the stern. Propeller guards are not suitable for all types of boats. Therefore, the best and safest course of action to take when people are in water near your boat--Shut off your engines!



People in the water can be severely injured!



Weather

You should never leave the dock without first checking the local weather forecast. You can get the weather information from the TV, radio, local, newspaper, on-line, or from one of the weather channels on your VHF radio.

At certain times of the year weather can change rapidly and you should continually keep a "weather eye" out. While you are out in a boat here are a few signs you can look for that indicate an approaching weather change:

- Weather changes generally come from the west. Scan the sky with your weather eye, especially to the west.
- Watch for cloud to build up, especially rapid vertically rising clouds.
- Sudden drop in temperature.
- Sudden change in wind direction and/or speed.
- If you have a barometer on your boat, check it every 2 to 3 hours. A rising barometer indicates fair weather and rise in wind velocity; a falling barometer indicates stormy or rainy weather.

What To Do in Severe Weather

- Reduce speed, but keep just enough power to maintain headway.
- Put on your PFDs.
- Turn on running lights.
- Head for nearest shore that is safe to approach, if possible.
- Head bow of boat into the waves at about a 45-degree angle.
- Keep bilges free of water.
- Seat passengers on bottom of boat near centerline.
- If your engine fails, trail a sea anchor on a line from the bow to keep the boat headed into the waves. A bucket will work as a sea anchor in an emergency.
- Anchor the boat if necessary.

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Federal Requirements

Equipment Requirements - PFD

The Coast Guard sets minimum safety standards for recreational boats and associated safety equipment. To meet these standards some of the equipment must be Coast Guard approved. "Coast Guard Approved Equipment" meets Coast Guard specifications and regulations relating to performance, construction or materials.

Personal Flotation Devices

- Child PFD requirements
- PFD Flotation
- Types of PFDs

TYPE I PFD, OFF-SHORE LIFE JACKET
TYPE II PFD, NEAR-SHORE BUOYANCY VEST
TYPE III PFD, FLOTATION AID
TYPE IV PFD, THROWABLE DEVICE
TYPE V PFD, SPECIAL USE DEVICE

Personal Flotation Devices

All recreational boats must carry one wearable PFD (Type I, II, III or V PFD) for each person aboard. A Type V PFD provides performance of either a Type I, II, or III PFD (as marked on its label) and must be used according to the label requirements. Any boat 16ft and longer (except canoes and kayaks) must also carry one throwable PFD (Type IV PFD).

PFDs must be

- Coast Guard approved,
- in good and serviceable condition, and
- the appropriate size for the intended user.

Accessibility

- Wearable PFDs must be readily accessible.
- You must be able to put them on in a reasonable amount of time in an emergency (vessel sinking, on fire, etc.).
- They should not be stowed in plastic bags, in locked or closed compartments or have other gear stowed on top of them.
- The best PFD is the one you will wear.
- Though not required, a PFD should be worn at all times when the vessel is underway. A wearable PFD may save your life, but only if you wear it.
- Throwable devices must be immediately available for use.

Inflatable PFDs

- Inflatable PFDs may be more comfortable to wear.
- The best PFD is the one you will wear.
- Inflatable PFDs require the user to pay careful attention to the condition of the device.
- Inflatable PFDs must have a full cylinder and all status indicators on the inflator must be green, or the device is NOT serviceable, and does NOT satisfy the requirement to carry PFDs.
- Coast Guard Approved Inflatable PFDs are authorized only on recreational boats by a person at least 16 years of age.



Child PFD requirements

Some states require that children wear PFDs

- applies to children of specific ages
- applies to certain sizes of boats
- applies to specific boating operations

Check with your state boating safety officials.

Child PFD approvals are based on the child's weight. Check the "User Weight" on the label, or the approval statement that will read something like "Approved for use on recreational boats and uninspected commercial vessels not carrying passengers for hire, by persons weighing __ lbs". They can be marked "less than 30", "30 to 50", "less than 50", or "50 to 90".



PFD requirements for certain boating activities under state laws

The Coast Guard recommends and many states require wearing PFDs:

- For water skiing and other towed activities (use a PFD marked for water skiing).
- While operating personal watercraft (PWC) (use a PFD marked for water skiing or PWC use).
- During white water boating activities.
- While sailboarding (under Federal law, sailboards are not "boats").

Check with your state boating safety officials.

Federal law does not require PFDs on racing shells, rowing sculls and racing kayaks. State laws vary. Check with your state boating safety officials.

If you are boating in an area under the jurisdiction of the Army Corps of Engineers, or a federal, state, or local park authority, other rules may apply.

Remember, PFDs will keep you from sinking, but not necessarily from drowning

Select a properly sized PFD to insure a safe and proper fit.

■ Test your PFD by wearing it in shallow water or guarded swimming pool to see how it will float you.

Coast Guard Auxiliary U.S. Power Squadrons Vessel Safety Check (VSC) Requirements for PFDs

- All boats must be equipped with a wearable PFD for each person on board.
- Boats 16 feet and over are required to have a minimum of two PFDs on board, one wearable PFD (Type I, II, III, or V) and one throwable (Type IV). In addition, a wearable PFD is required for each person on board.



PFD Flotation

There are three basic kinds of PFD flotation in the five *types* of PFDs with the following characteristics:

Inherently Buoyant (primarily Foam)

- The *most* reliable
- Adult, Youth, Child, and Infant sizes
- For swimmers & non-swimmers
- Wearable & throwable styles
- Some designed for water sports

Minimum Buoyancy		
Wearable Size	Туре	Inherent Buoyancy (Foam)
Adult	I II & III	22 lb. 15.5 lb.
	V	15.5 to 22 lb.
Youth	II & III	11 lb.
	V	11 to 15.5 lb.
Child and Infant	II	7 lb.
Throwable:		
Cushion	IV	20 lb.
Ring Buoy		16.5 & 32 lb.

Inflatable

- The most compact
- Sizes only for adults
- Only recommended for swimmers
- Wearable styles only
- Some with the best in-waterperformancee

Minimum Buoyancy

Wearable Size	Туре	Inherent Buoyancy
Adult	I & II	34 lb.
	III	22.5 lb.
	V	22.5 to 34 lb.

Hybrid (Foam & Inflation)

- Reliable
- Adult, Youth, and Child sizes
- For swimmers & non-swimmers
- Wearable styles only
- Some designed for water sports

Hybrid (Foam & Inflation)

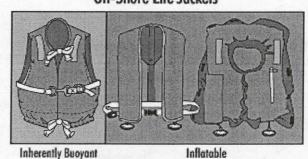
Туре	Inherent Buoyancy	Inflated Total Buoyancy
II & III	10 lb.	22 lb.
V	7.5 lb.	22 lb.
II & III	9 lb.	15 lb.
V	7.5 lb.	15 lb.
II	7 lb.	12 lb.
	II & III V II & III V	II & III 10 lb. V 7.5 lb. II & III 9 lb. V 7.5 lb.



Types of PFDs

A TYPE I PFD, or OFF-SHORE LIFE JACKET provides the most buoyancy. It is effective for all waters, especially open, rough or remote waters where rescue may be delayed. It is designed to turn most unconscious wearers in the water to a face-up position.

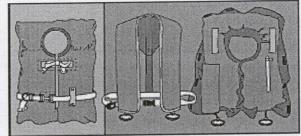
Off-Shore Life Jackets





A TYPE II PFD, or NEAR-SHORE BUOYANCY VEST is intended for calm, inland water or where there is a good chance of quick rescue. Inherent buoyant PFDs of this type will turn *some* unconscious wearers to a face-up position in the water, but the turning is not as pronounced as a Type I. This type of inflatable turns as well as a Type I foam PFD.

Near-shore Buoyancy Vests



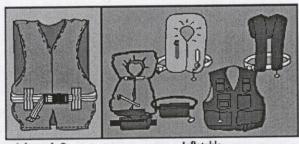
Inherently Buoyant

Inflatable



A TYPE III PFD, or FLOTATION AID is good for conscious users in calm, inland water, or where there is a good chance of quick rescue. It is designed so wearers can place themselves in a face-up position in the water. The wearer may have to tilt their head back to avoid turning face-down in the water. The Type III foam vest has the same minimum buoyancy as a Type II PFD. It comes in many styles, colors, and sizes and is generally the most comfortable type for continuous wear. Float coats, fishing vests, and vests designed with features suitable for various sports activities are examples of this type PFD. This type inflatable turns as well as a Type II foam PFD.

Flotation Aid



Inherently Buoyant

Inflatable



A TYPE IV PFD, or THROWABLE DEVICE is intended for calm, inland water with heavy boat traffic, where help is always present. It is designed to be thrown to a person in the water and grasped and held by the user until rescued -- It is *not* designed to be worn. Type IV devices include buoyant cushions, ring buoys, and horseshoe buoys. There are no inflatable Type IV devices.

Throwable Devices



A TYPE V PFD, or SPECIAL USE DEVICE is intended for specific activities and may be carried instead of another PFD only if used according to the approval condition(s) on its label. A Type V PFD provides performance of either a Type I, II, or III PFD (as marked on its label). If the label says the PFD is "approved only when worn" the PFD must be worn, except for persons in enclosed spaces and used in accordance with the approval label, to meet carriage requirements. Some Type V devices provide significant hypothermia protection. Varieties include deck suits, work vests, and board sailing vests.

Special Use Device



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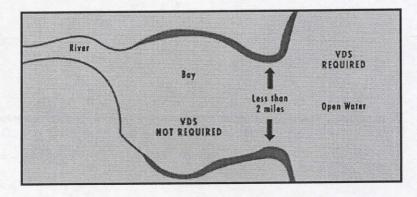
Equipment Requirements - Visual Distress Signals

Pyrotechnic Devices

Non-Pyrotechnic Devices

Visual Distress Signals

All vessels used on coastal waters, the Great Lakes, territorial seas, and those waters connected directly to them, up to a point where a body of water is less than two miles wide, must be equipped with U.S.C.G. Approved visual distress signals. Vessels owned in the United States operating on the high seas must be equipped with U.S.C.G. Approved visual distress signals.



The following vessels are not required to carry day signals but must carry night signals when operating from sunset to sunrise:

- Recreational boats less than 16 feet in length.
- Boats participating in organized events such as races, regattas, or marine parades.
- Open sailboats less than 26 feet in length not equipped with propulsion machinery.
- Manually propelled boats.

Pyrotechnic Devices

Pyrotechnic Visual Distress Signals must be Coast Guard Approved, in serviceable condition, and readily accessible.

- They are marked with an expiration date. Expired signals may be carried as extra equipment, but can not be counted toward meeting the visual distress signal requirement, since they may be unreliable.
- Launchers manufactured before January 1, 1981, intended for use with approved signals, are not required to be Coast Guard Approved. 43





- If pyrotechnic devices are selected a minimum of three are required. That is, three signals for day use and three signals for night. Some pyrotechnic signals meet both day and night use requirements.
- Pyrotechnic devices should be stored in a cool, dry location, if possible.
- A watertight container painted red or orange and prominently marked "DISTRESS SIGNALS" or "FLARES" is recommended.

U.S.C.G. Approved Pyrotechnic Visual Distress Signals and associated devices include:

- Pyrotechnic red flares, hand-held or aerial.
- Pyrotechnic orange smoke, hand-held or floating.
- Launchers for aerial red meteors or parachute flares.

[Each of these devices has a different operating (burning) time x seconds to y seconds. Check the label to see how long each pyrotechnic device will actually be illuminated. This will allow you to select a warning device better suited to the conditions where your boat will operate.]



Non-Pyrotechnic Devices

Non-Pyrotechnic Visual Distress Signals must be in serviceable condition, readily accessible, and certified by the manufacturer as complying with U.S.C.G. requirements.

They include:

Orange distress flag

- Day signal only.
- Must be at least 3 x 3 feet with a black square and ball on an orange background.
- Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 160.072.
- Most distinctive when attached and waved on a paddle, boathook, or flown from a mast.
- May also be incorporated as part of devices designed to attract attention in an emergency, such as balloons, kites, or floating streamers.

Electric distress light

- Accepted for night use only
- Automatically flashes the international SOS distress signal (... -- ...)
- Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 161.013.

Under Inland Navigation Rules, a high intensity white light flashing at regular intervals from 50-70 times per minute is considered a distress signal. Such devices do NOT count toward meeting the visual distress signal requirement, however.

Regulations prohibit display of visual distress signals on the water under any circumstances except when assistance is required to prevent

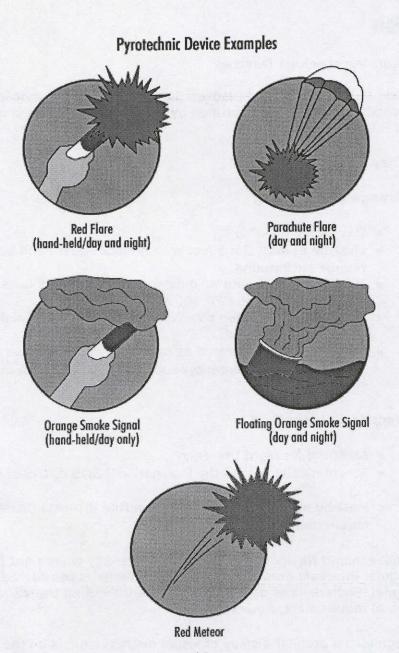
immediate or potential danger to persons on board a vessel.

All distress signals have distinct advantages and disadvantages. No single device is ideal under all conditions or suitable for all purposes. Pyrotechnics are universally recognized as excellent distress signals. However, there is potential for injury and property damage if not properly handled. These devices produce a very hot flame and the residue can cause burns and ignite flammable materials.

Pistol launched and hand-held parachute flares and meteors have many characteristics of a firearm and must be handled with caution. In some states they are considered a firearm and prohibited from use.

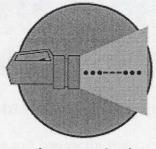
The following are just a few of the variety and combination of devices which can be carried in order to meet the requirements:

- Three hand-held red flares (day and night).
- One hand-held red flare and two parachute flares (day and night).
- One hand-held orange smoke signal, two floating orange smoke signals (day) and one electric distress light (night only).



Non-Pyrotechnic Device Examples





Electric Distress Signal (night only)

All boaters should be able to signal for help. Boaters must have current dated U.S.C.G. Approved day and night signals for all boats operating on coastal and open bodies of water.

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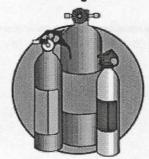
Federal Requirements

Equipment Requirements - Fire Extinguishers

Coast Guard Approved fire extinguishers are required on boats where a fire hazard could be expected from the motors or the fuel sytem. Extinguishers are classified by a letter and number symbol. The letter indicates the type of fire the unit is designed to extinguish (Type B, for example, are designed to extinguish flammable liquids such as gasoline, oil and grease fires). The number indicates the relative size of the extinguisher. The higher the number, the larger the extinguisher.

Coast Guard approved extinguishers required for boats are hand portable, either B-I or B-II classification and have a specific marine type mounting bracket. The special bracket is required to securely hold the extinguisher in a moving boat. It is recommended the extinguishers be mounted in a readily accessible position, away from the areas where a fire could likely start such as the galley or the engine compartment.

Fire Extinguishers



Extinguisher markings can be confusing because extinguishers can be approved for several different types of hazards. For instance, an extinguisher marked "Type A, Size II, Type B:C, Size I" is a B-I extinguisher.

Look for the part of the label that says "Marine Type USCG".

- Make sure Type B is indicated
- Portable extinguishers will be either size I or II. Size III and larger are too big for use on most recreational boats.

Classes	Foam (Gals)	CO ₂	Dry Chemical (lbs)	Halon (lbs)
B-I (Type B, Size I)	1.25	4	2	2.5
B-II (Type B, Size II)	2.5	15	10	10

Fire extinguishers are required on boats if any of the following conditions exist:

- Inboard engines are installed.
- There are closed compartments and compartments under seats where portable fuel tanks may be stored.
- There are double bottoms not sealed to the hull or which are not completely filled with flotation materials.
- There are closed living spaces.
- There are closed stowage compartments in which combustible or flammable materials are stored.
- There are permanently installed fuel tanks. (Fuel tanks secured so they cannot be moved in case of fire or other emergency are considered permanently installed. There are no gallon capacity limits to determine if a fuel tank is portable. If the weight of a fuel tank is such that persons on board cannot move it, the Coast Guard considers it permanently installed.)

Fire Extinguisher Maintenance

Inspect extinguishers monthly to make sure that:

- Seals and tamper indicators are not broken or missing.
- Pressure gauges or indicators read in the operable range.
 (Note: CO₂ extinguishers do not have gauges.)
- There is no obvious physical damage, corrosion, leakage or clogged nozzles.
- Weigh extinguishers annually to assure that the minimum weight is as stated on the extinguisher label.

Fire extinguishers that do not satisfy the above requirements or that have been partially emptied must be replaced or taken to a qualified fire extinguisher servicing company for recharge.

Required Number of Fire Extinguishers

The number of fire extinguishers required on a recreational boat are based on the overall length of the boat. The following chart lists the number of extinguishers that are required. In the case where a Coast Guard approved pre-engineered fire extinguishing system is installed for the protection of the engine compartment, the required number of units may be reduced in accordance with the chart.

Minimum number of hand portable fire extinguishers required:

Vessel Length	No Fixed System	With Approved Fixed Systems	
Less than 26'	1 B-1	0	
26' to less than 40'	2 B-1 or 1 B-II	1 B-I	
40' to 65' 3 B-I or 1 B-II and 1		-I 2 B-1 or 1 B-II	

The pressure gauge alone is not an accurate indicator that Halon extinguishers are full. The weight of the units should be checked regularly. It is recommended that portable extinguishers be mounted in a readily accessible position.

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Federal Requirements

Equipment Requirements - Sound Producing Devices

The navigation rules require sound signals to be made under certain circumstances. Meeting, crossing and overtaking situations described in the Navigation Rules section are examples of when sound signals are required. Recreational vessels are also required to sound signals during periods of reduced visibility.

Vessels 39.4 feet/12 meters or more in length are required to carry on board a whistle or horn, and a bell.





Any vessel less than 39.4 feet/12 meters in length may carry a whistle or horn, or some other means to make an efficient sound signal to signal your intentions and to signal your position in periods of reduced visibility.

Therefore, any vessel less than 39.4 feet/12 meters in length is required to make an efficient sound signal to signal intentions and to signal your position in periods of reduced visibility.

Vessel Operators are required to carry some type of horn or whistle capable of a 4 second blast audible for 1/2 mile for all boats. (Athletic whistles are not acceptable on boats over 39.4 feet/12 meters.)

Last Modified On: Tuesday, October 23, 2001

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Federal Requirements

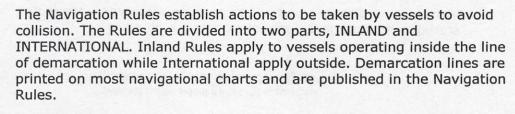
Equipment Requirements - Operating Procedures

Crossing Situations

Head-on Situations

Overtaking Situations

Navigation Rules

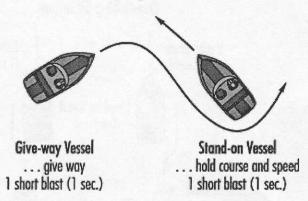


The operator of a vessel 39.4 feet/12 meters or greater is responsible for having on board and maintaining a copy of the Inland navigation rules. The following diagrams describe the whistle signals and action to be taken by vessels in a crossing, meeting or overtaking situation while operating in inland waters. These are basic examples, for further information consult the "NAVIGATION RULES" International Inland (Commandant Instruction M16672.2 Series)

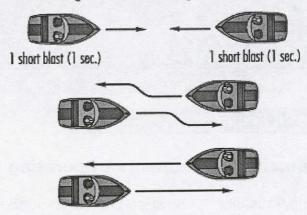
Copies of the rules may be obtained from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954 tel. (202) 783-3238.



Crossing Situations



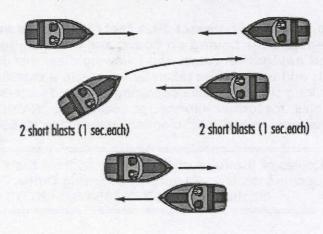
Meeting Head-On or Nearly So Situations



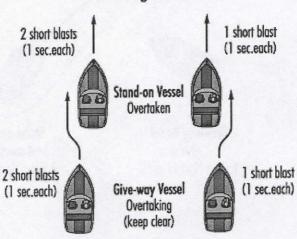


Vessels generally pass portside to portside. However, vessels may pass starboard to starboard if proper signals are given.

Vessels generally pass portside to portside. However, vessels may pass starboard to starboard if proper signals are given.



Overtaking Situations



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Federal Requirements

Equipment Requirements - Vessel Operating Offshore

<u>Lateral</u> <u>Mid-Channel</u> Aids <u>Markers</u>

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Markers

Safety

Aids to Navigation

Aids to Navigation are placed along coasts and navigable waters as guides to mark safe water and to assist mariners in determining their position in relation to land and hidden dangers. Each aid to navigation is used to provide specific information.

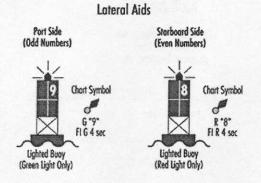
Several aids to navigation are usually used together to form a local aid to navigation system that helps the mariner follow natural and improved channels. Such aids to navigation also provide a continuous system of charted marks for coastal piloting. Individual aids to navigation are used to mark landfall from seaward, and to mark isolated dangers.

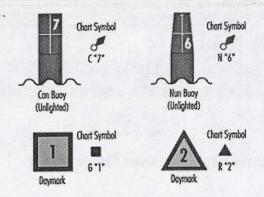
Lateral markers are buoys or beacons that indicate the port and starboard sides of a route to be followed. Virtually all U.S. lateral marks follow the traditional 3R rule of "red, right, returning". This means, when returning from sea, keep red marks on the right-hand (starboard) side of the vessel.

Mariners must NOT rely on buoys alone for determining their position. Storms and wave action can cause buoys to move.

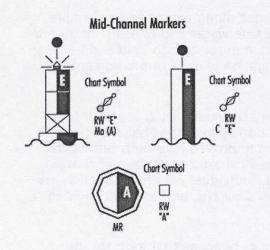
Lateral Aids

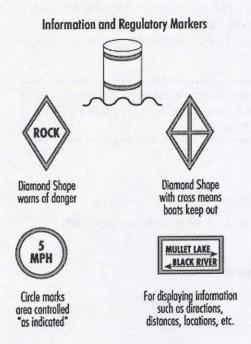
Lateral aids marking the sides of channels as seen when entering from seaward.





Do not tie up to Aids to Navigation, it is dangerous and illegal.







Locking

Locking is your only means of moving up or down river through a dam area. Locking is dangerous if you are not familiar with these following steps:

The during heavy traffic the lockmaster usually locks boats in the following priority:

1st Priority. -Military Craft

2nd Priority -Mail Boats

3rd Priority -Commercial Passenger Craft

4th Priority -Commercial Tows (ie Barges)

5th Priority -Commercial Fisherman

6th Priority -Pleasure Boats

Sometimes small craft are required to wait and lock through with other craft.

- 1. Craft going downstream should stay in the clear 400 feet upstream from the end of the guide wall after signaling for permission to lock. This is a safety feature in case large craft leave the lock and head your direction. Always head for the lock and not the Dam.
- 2. Not more than one mile of the lock a signal must be given: one long blast, and one short blast. some locks may have whistles along the guide walls. Radio frequency for locking in most areas is channel 13 (156.65 MHz) and channel 14 (156.7 MHz). Channel 16 (156.8 MHz) is also monitored, but is used mainly for authorized call, reply and distress (no locking on this channel.
- 3. Some locks have traffic signals like traffic lights. Others may use airhorns or both:

Red Light Stand Clear.

Yellow Light Approach Lock but under Full Control.

Green Light Enter Lock.

One Long Blast Enter Landward Lock

Two Long Blasts Enter Riverward Lock

One Short Blast Leave Landward Lock

Two Short Blasts Leave Riverward Lock.

(Keep in mind "Long to Enter" "Short to Exit" "One Landward" Two Riverward" ie. two short mean leave riverward locks)

- 4. No Smoking! Fumes from engines build in the locks.
- 5. You should carry at least 50 feet of mooring line. Do not tie up to ladders along the wall.
- 6. Be sure to have a mooring ring or a similar device on your boat which your line can be tied, (ring, bit, cleat, chock, ring bit). Some lock walls may even contain a floating mooring hook that moves with the level of the water.
- 7. Small boats and larger pleasure boats with only one person aboard may use one long line fastened securely at one end of the boat, while the bight of the line around the mooring post on the lock wall then leads towards the free end of the line around a cleat at the other end of the boat. This will allow the boater to leave out or take in the open end line as the water drops or rises and prevents the boat from floating around in the lock. Larger boats should have two persons, one at each end with open line around a cleat on each end and the mooring post with the attachment (large loop).
- 8. You must take in or let out mooring line throughout the locking process!
- 9. Locks with floating mooring bitts allow the boater to place a line from the attached end to around the nooring bit and then locate to the opposite end of the boat with the open end to take in or let out line. Use tationary bits to check the momentum of your vessel.
- 10. Be sure to use fenders to prevent damage to your boat.
- 11. Passengers should always stay seated.
- 12. Life jackets should always be warn when handling lines or in rough weather.
- 13. Keep speeds low.
- 14. Always obey lockmasters.
- 15. Stay between the red and black buoys (white on top). It is your guide through the navigable channel.
- 16. Always keep your distance from the stern of the tows. The stern waves can capsize a small craft.
- 17. Avoid passing in front of tows.
- 18. Keep away from barges moored along the river. Small craft can get carried under by the undertow.

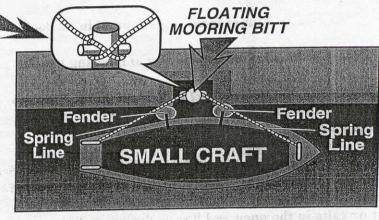
How To Lock Through

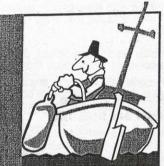


Receive permission to enter the lock either verbally from the lock operator or from horn and light signals. Proceed into the lock and tie up at the mooring bitt designated by the lock operator. MAKE SURE YOU SECURE YOUR VESSEL TO THE FLOATING MOORING BITT AND NOT TO A LADDER OR OTHER IMMOVABLE DEVICE.

Due to lock design, safety factors, etc., the lock operator will often request a specific mooring bitt be used by small craft.







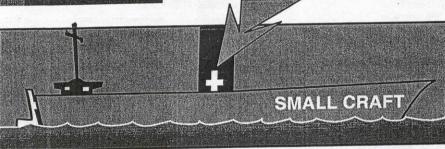
Place fenders fore and aft on side of vessel high enough to protect outermost edge of vesselusually at widest point

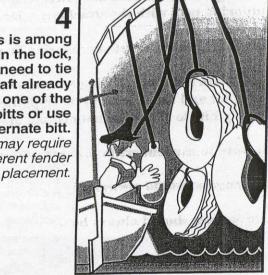
on either side of mooring bitt.

MOORING BITT

If yours is among several vessels in the lock, you may need to tie alongside a craft already secured to one of the mooring bitts or use an alternate bitt.

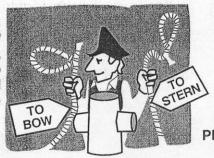
This may require different fender





5 Position your vessel so the mooring bitt is located amidship.

Use two spring lines, one from your bow to the mooring bitt and one from your stern to the mooring bitt.

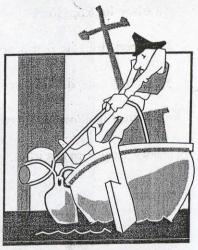


Secure both lines around the mooring bitt so they may be released quickly, in case the bitt gets stuck.

Keep careful watch throughout the lockage.
In case of emergency, you could be told to quickly release your vessel from the mooring bitt.

Please remain secured to bitt

until told to proceed.



TIPS FOR SAFE BOATING

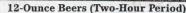
ALCOHOL & WATER SAFETY

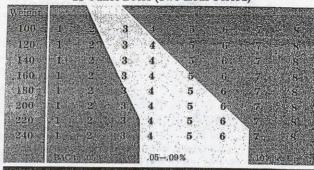
TIPS FOR SAFE BOATING

- Take a boating safety class offered by your local Power Squadron. Coast Guard Auxiliary or Red Cross.
- Know your boat's load limit, and don't exceed it. A safe boat is a well-equipped boat. Always carry the necessary safety gear . . . and know how to use it.
- Knowing how to swim just makes good sense if you spend time on the water. If you don't know how, LEARN. However, even good swimmers do not always survive the shock or panic of sudden immersion in cold water.
- Keep life jackets visible and accessible

 and never make someone feel
 uncomfortable if they choose to wear
 life jacket.
- Learn "the rules of the road" . . . and obey them!
- Don't overdo your boating fun. In 3 hours of normal boating, the noise, motion, sun, wind and glare can frequently double an individual's reaction time.
- Remember, while a drink or two can relax you and make your day more enjoyable, they may also slow your reaction time, reduce your coordination, and increase your susceptibility to hypothermia.







KNOW HOW ALCOHOL AFFECTS YOU

Alcohol affects people differently. The chart above shows how much the Blood Alcohol Content is raised by consuming 12-oz, beers in a two-hour period. This chart provides averages only, and reactions will vary depending upon such factors as food in the stomach, medication, mood and fatique.



Be careful! Reaction time slowed, decreased coordination, changes in mood and behavior.

BAC .05% to .09% Boat operating ability may be impaired! Blurred, split or tunnel vision may occur. Reduced coordination. Chance of accident is greatly increased.



Do not operate a boat! Inhibitions and judgement seriously affected. Responses slowed and dull. Behavior greatly affected. High risk of accident.

QUESTIONS & ANSWERS

- Q Why do some people get tipsy on just one or two drinks?
- A A number of things can influence how alcohol affects you. Drinking on an empty stomach, when you're tired, tense or on medication can all increase alcohol's effects. How fast you drink and the amount of alcohol in your drink can also affect alcohol's impact.
- Q What's the fastest way to solber up?
- A There are no shortcuts. Cold showers, hot coffee and other "remedies" won't make you sober. Only time will do that. All you can do is wait.
- Q How soon after drinking can a person drive?
- A There's no easy answer Remember, you body can process about one drink in an hour, so pace yourself.

ALCOHOL'S EFFECTS ON THE BODY Most states define impairment at .10% Blood Alcohol Content. However, even lower levels of blood alcohol may affect a person's balance, vision or judgement. This can be especially dangerous when on the water.

BALANCE ...

Alcohol impacts an individual's sense of balance. A moment of dizziness or even a mis-step may not cause any harm on your patio or in a restaurant, but it can lead to disaster on the water.

VISION ...

Safe boating requires good vision and too much alcohol can seriously restrict your vision. It can create a "tunnel vision" effect, reducing peripheral vision. It can impair your ability to "focus" on objects and it can reduce your night vision, especially for reds and greens . . . the colors of running lights.

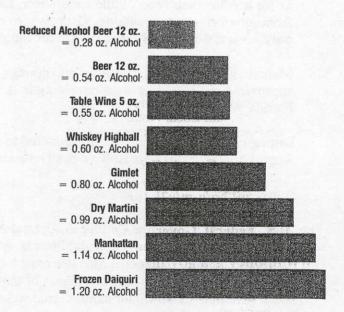
BOATING, ALCOHOL AND SAFETY Operating a boat is at least as complicated as driving a car and a boating accident can be just as dangerous as an automobile accident. Yet many people who would never drive drunk think it's safe to operate their boat after drinking. It isn't. In fact, 50% of all boating fatalities are alcoholrelated. Operating a boat while intoxicated is illegal and dangerous.

DANGER ZONES FOR DRINKING BOAT OPERATORS One Drink = A 12 oz. beer OR 4 oz. of 12% wine OR 1½ oz. 86 proof liquor

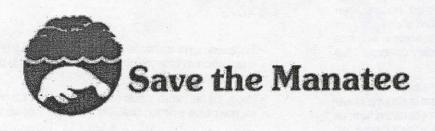
Boating Stress Factors intensify alcohol's effects. The table shows, by body weight, how many drinks will impair a boat operator's balance, vision, coordination and judgment. Smart skippers stay sober.

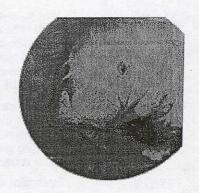
ALCOHOL FACTS

- Moderation and common sense should dictate how much alcohol is consumed on your boat. Limit your consumption to one drink (or less) per hour.
- Ideally, the helmsman should not drink. A responsible boat owner will never allow a person under the influence to operate the boat.
- Alcohol affects your judgment. It makes you think you can function better than when you are sober. But in fact, alcohol slows your reaction time considerably.
- Hard liquor may hit a little harder or faster than beer or wine —
 especially if it is not diluted . . . but too much beer or wine can
 be just as bad as too much liquor.
- Images can be deceiving. Some so-called "ladies drinks" pack a man-sized wallop. A daiquiri can have more than twice the alcohol of a beer or a whiskey and soda.
- Know how much you're drinking. The guest who can't stand up after "only two drinks" may have had two tumblers of straight vodka or scotch. Even moderate drinkers may be drinking more than they think if they aren't measuring their drinks. Keep a jigger handy . . . and use it.



REMEMBER - SAFE BOATING IS FUN BOATING





The West Indian Manatee in Florida

The manatee, *Trichechus manatus*, is a grayish-brown, walrus-like animal weighing on average between 800-1200 pounds and growing approximately 12.7 feet in length. They are mammals, hence they breathe air, have body hair and nurse their young. Manatees have a round,



flattened tail, and 2 front flippers. These flippers are used in steering while swimming, as well as for holding their food. While underwater, flaps close over their nostrils, to prevent water from interfering with breathing. The newborn calves range from 3 to 5 feet long, and beginning only several weeks after birth, they start eating plants such as seagrasses and algae.

Manatees are completely harmless and nonaggressive and are often shy and reclusive. There are approximately 2,247 manatees remaining in the southeastern U.S. and they are concentrated in Florida year-round.

During cold weather, manatees are attracted to the warm-water discharges of five FPL plants. Approximately 1200 animals have been counted with serial surveys at these facilities.

Range

The waters throughout the Caribbean, Central America, Colombia, Venezuela, and the northern coast of Brazil, as well as peninsular Florida, are home to the West Indian Manatee. Two subspecies of the West Indian Manatee exist today. One is found only in Florida and the other is located throughout the northern region of the Caribbean, and the coastal waters of North and South America. In the winter months, cold weather shortens their northernmost range to Florida, while in the summer time, some swim as far north as Virginia and as far west as Texas. In a few cases, manatees have been observed to cover over 520 miles, each way, during their migrations. One manatee was known to swim 143 miles in only four days!

Mortality

Manatee deaths throughout Florida have become an issue of serious concern. The primary causes of death are collisions with boats, cold weather, and red tides as well as entanglement in

fishing line, loss of habitat, and chemical pollution. These ancient creatures need our help in order to survive into the next century and beyond.

Attention: Swimmers, Boaters, Divers Guidelines for Protecting Manatees

Manatee Do's and Don'ts

The West Indian Manatee is an endangered species and is protected by state and federal law. Please avoid harassing or disturbing manatees. Harassment is defined as any activity which alters the animal's natural behavior. By altering the manatee's natural behavior, you may create the likelihood of danger that is bad for the animal, and against the law.

1. BEING NEAR MANATEES

- Look, but don't touch manatees. Also, don't feed manatees or give them water. If
 manatees become accustomed to being around people, they can alter their behavior in the
 wild, perhaps causing them to lose their natural fear of boats and humans, and this may
 make them more susceptible to harm. Passive observation is the best way to interact with
 manatees and all wildlife.
- Do not pursue or chase a manatee while you are swimming, snorkeling, diving, or operating a boat.
- Never poke, prod, or stab a manatee with your hands, feet, or any object.
- If a manatee avoids you, you should avoid it.
- Don't isolate or single out an individual manatee from its group, and don't separate a cow from her calf.
- Don't attempt to snag, hook, grab, hold, pinch, or ride a manatee.
- Avoid excessive noise and splashing if a manatee appears in you swimming area.
- Use snorkel gear when attempting to watch manatees. The sound of bubbles from scuba gear may cause manatees to leave the area.
- When snorkeling don't wear a weight belt. Float at the surface of the water and passively observe the manatee. Look but don't touch.

2. DON'T ENTER AREAS DESIGNATED AS "NO ENTRY - MANATEE REFUGE"

These areas have been identified by the Florida Department of Environmental Protection and the U.S. Fish and Wildlife Services as crucial for manatee survival.

3. WHEN BOATING OR JET SKIING

- Abide by the posted speed zone signs while in areas known to have manatees present or when observations indicate manatees might be present. Observations may include a swirl at the surface caused by the manatee while diving; seeing the animal's back, snout, tail, or flipper break the surface of the water; or hearing it when it surfaces to breathe.
- Wear polarized sunglasses to reduce glare on the surface of the water. This will enable you to see manatees more easily.
- Try to stay in deep water channels. Manatees can be found in shallow, slow moving rivers, estuaries, lagoons, and coastal areas. Avoid boating over seagrass beds and shallow areas.

- Remain at least 50 feet away from a manatee when operating a powerboat. Don't operate a boat over large concentrations of manatees.
- If you like to water ski, please choose areas that manatees do not use, or cannot enter, such as land locked lakes.
- Please don't discard monofilament line, hooks, or any other litter into the water.

 Manatees may ingest or become entangled in the debris and become injured or even die.

 Note: discarding monofilament fishing line into the waters of Florida is unlawful.

REMEMBER:

LOOK BUT DON'T TOUCH. INTERACTIONS WITH HUMANS MAY BE HAZARDOUS TO THE MANATEE'S WELL BEING.

Observe the Signs

Idle Speed Zone -- a zone in which boats are not permitted to go any faster than necessary to be steered.

Slow Speed Zone -- a minimum wake zone where boats must not be on a plane and must be level in the water.

Caution Area -- an area frequently inhabited by manatees, requiring caution on the part of boaters to avoid disturbing or injuring the animals.

Resume Normal Safe Operation -- a sign indicating that you may resume safe boating speed; visible as you leave a protected area

No Entry Zone -- a protected zone that prohibits boating, swimming, and diving for the protection of manatees.

How You Can Help

- 1. Obey all boating signs and always keep alert for marine life while on the water.
- 2. Don't feed, touch, or harass the manatees.
- 3. Don't discard monofilament line, hooks, or any other litter into the water.
- 4. You can make a donation to the Florida Department of Environmental Protection to help protect the manatee when you register your boat.
- 5. You can also buy a Save the Manatee license plate for your car at your Florida local tag office.

Protection by Law

The manatee is protected under federal law by the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973, which make it illegal to harass, hunt, capture or kill any marine mammal. The manatee is also protected by the Florida Manatee Sanctuary Act of 1978, which states: "It is unlawful for any person, at any time, intentionally or negligently, to annoy, molest, harass, or disturb any manatee."

Anyone convicted of violating this state law faces a possible maximum fine of \$500 and/or

imprisonment for up to 60 days. Conviction on the federal level is punishable by a fine of up to \$50,000 and/or one year in prison. The State of Florida can pursue prosecution under federal law in circumstances of extreme harassment, resulting in the death or injury of a manatee.

This document is the cooperative effort of the following groups. They may be contacted for additional information:

Save the Manatee Club

500 N. Maitland Avenue Maitland, Florida 32751 (407) 539-0990 (800) 432-JOIN

Florida Power & Light Company

Environmental Services Department P.O. Box 14000 Juno Beach, Florida 33408 (800) 552-8440

U.S. Fish and Wildlife Service

6620 Southpoint Drive, South Suite 310 Jacksonville, Florida 32216-0912 (904) 232-2580

Florida Department of Environmental Protection

Bureau of Protected Species Management 3900 Commonwealth Blvd., MS 245 Tallahassee, Florida 32399-3000 (904) 922-4330

Call 1-800-DIAL-FMP (1-800-342-5367) to report manatee injuries, deaths, tag sightings or harassment.

Visit the Manatee Observation Center at FPL's Riveria Power Plant

Click here for indepth information regarding the West Indian Manatee in Florida. Suitable for research at high school and college levels. Includes extensive bibliography.

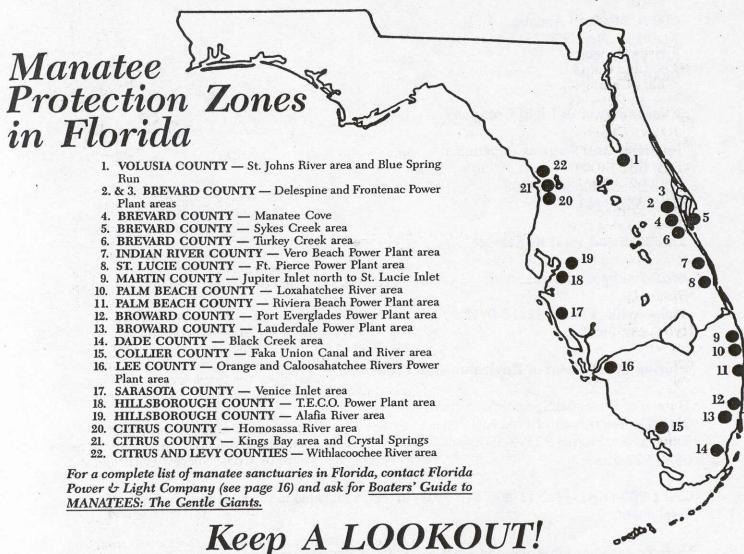
It's the Law...

Manatees are protected by state and federal laws. The Endangered Species Act of 1973 is perhaps the most important wildlife law that assists in the protection of manatees and other endangered and threatened species. Under the Act, it is illegal to "kill, hunt, collect, harass, harm, pursue, shoot, trap, wound, or

capture" a member of an endangered species. Protection of critical habitat is also provided. Violators can be sentenced to up to one year in prison and/or be fined up to \$20,000 for a criminal offense under this act.

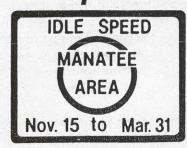
The Marine Mammal Protection Act of 1972 also provides federal protection for manatees and othermarine mammals, including restrictions on products derived from these animals.

The Florida Manatee Sanctuary Act of 1978 established all of Florida as a manatee sanctuary. Under this act, slow and idle speed zones may be established in Florida waterways to protect these animals from boat collision injuries.





This sign is posted on the fringe of protected areas. You will see it as you approach the areas.



This sign appears in the center of protected areas.



This sign appears in the Crystal River Sanctuary and Blue Spring Sanctuary. It means no swimming, boating, or diving.



This sign appears on the fringe of protected areas. You will see it as you leave the areas.



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Raster Nautical Charts

The Navigational Chart is one of the most fundamental tools available to the mariner. In the very early days of the United States, commerce between the states was mostly waterborne and foreign trade, necessary for survival and expansion of our national economy, was entirely by sea. This still holds true today with over 98% of the nation's cargo carried by waterborne transportation -- a good portion consisting of

31 AREA 36 rhy 31

Old Man Shoal

AREA 36 rhy 31

OPA 45 21

Obstn 17 9 23

NOMANS LANDL 16

Side 17

Example of a Nautical Chart Section

hazardous cargo posing a continuous threat to the environment.

What is a Nautical Chart? A Nautical Chart is a graphic portrayal of the marine environment. In addition to providing the most *basic elements (a schematic layout of a Coast Survey chart), a chart is a working document used by the mariner both as a "road map" and worksheet and is essential for safe navigation. In conjunction with supplemental navigational aids, it is used to lay out courses and navigate ships by the shortest and most economically safe route. A chart shows the nature and form of the coast, the depths of the water and general character and configuration of the sea bottom, locations of dangers to navigation, the rise and fall of the tides, locations of man-made aids to navigation, and the characteristics of the Earth's magnetism.

In addittion to the traditional paper product, charts are also available in:

- Raster Format Raster Nautical Chart (RNC): A georeferenced, digital picture of a paper chart which can be used in a raster chartsystem; and
- Vector Format Electronic Navigational Chart (ENC): The
 data base of chart features and their attributes which is used in
 an ECDIS to construct and query a chart-like display. The
 ENC data is written in an exchange standard of the IHO
 designated S-57.
- * A comprehensive reference publication containing the basic chart elements, titled " Chart No. 1 Nautical Chart Symbols Abbreviations and Terms," incorporates chart symbols used on Coast Survey charts and those of many other nations.

Equally useful is another publication which provides a wealth of technical information concerning the structure, layout and construction of a nautical chart, titled the <u>Nautical Chart User's Manual</u>. This publications covers basic topographic and hydrographic features, aids to navigation, chart symbols, miscellaneous other charting features and supplemental information.

Today, nautical charts are used by the Departments of Defense and Transportation, state and local governments, commercial shippers, the fishing industry, and recreational boaters throughout the United

States. Navigational Charts and Coast Pilots are integral components necessary for the safety of life and property and safe and efficient navigation while transiting U.S. and territorial waterways. Federal law requires all ships in excess of 1600 gross tons to have and use current editions of these navigation products. Charts and hydrographic surveys are also used by environmental groups, academia, and coastal zone planners.

Additional Products and Programs

Adopt-a-Chart Program

Chart No 1

Dates of Latest Edition

Distance Between United States Ports

Exclusive Economic Zone

Light List (USCG)

Loran C conversions



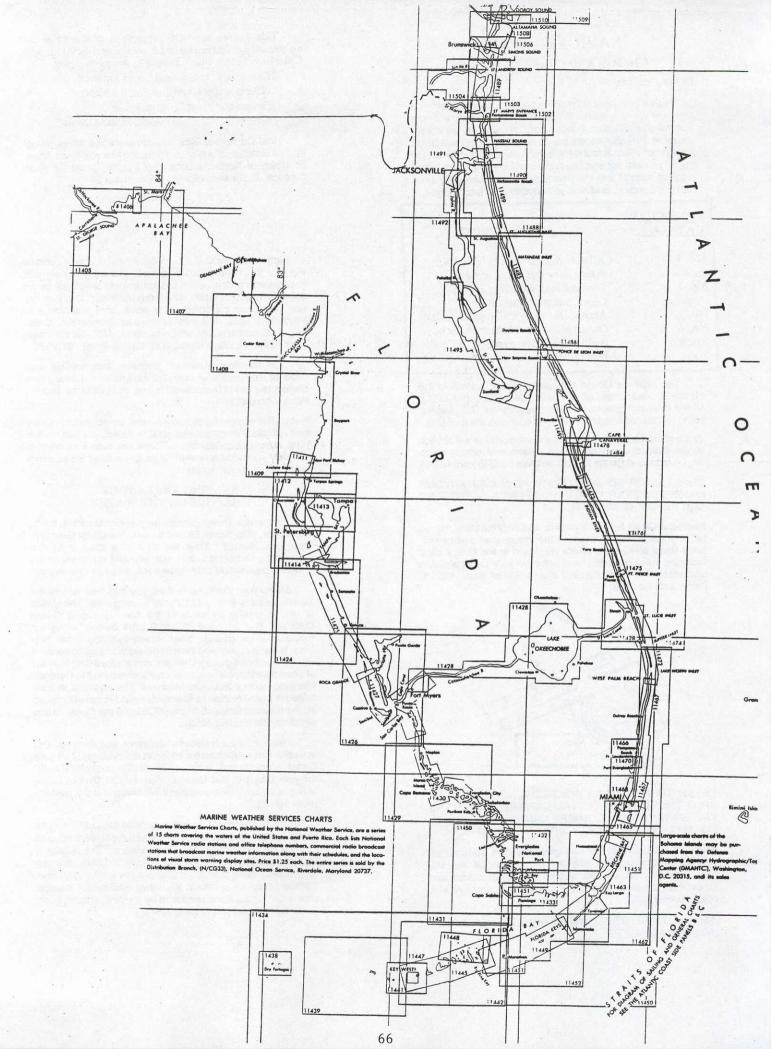
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Revised Friday June 21 2002by OCS Webmaster



NAVIGATION AIDS CHARTS AND CHART CATALOGS

DO I NEED CHARTS?

Even if your boat is small, you need a chart to help you find your way around the waterways, just as a map will help you when you are driving a car. A chart is especially valuable if you are caught out on the water unexpectedly at night or stranded in foul weather, when familiar landmarks to guide you are not visible. A chart will also help you steer clear of natural and man-made obstacles, keep you from running aground, and help you choose safe anchorages.

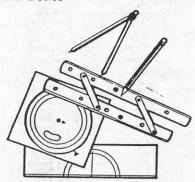
FREE CHART	AREA COVERED
No. 1	Atlantic & Gulf Coasts, including
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No. 2	Pacific Coast, including Hawaii,
	Guam, and the Samoa Islands
No. 3	Alaska, including the Aleutian Islands
No. 4	Great Lakes and Adjacent Waterways
No. 5	Bathymetric/Topographic
	Fishing Maps

The National Ocean Service (NOS), a division of the National Oceanic and Atmospheric Administration (NOAA), is the principal government chart agency for U.S. waters. NOS distributes free chart catalogs covering the four U.S.

recreational boating areas. The chart catalogs will tell you which chart(s) you need to have aboard, and include ordering instructions. Request your free chart catalog from NOAA.

CHARTS ARE SO CONFUSING! HOW CAN ANYONE MAKE SENSE OUT OF ALL THOSE LINES, SQUIGGLES AND FUNNY ABBREVIATIONS?

Nautical Chart No. 1, "Symbols and Abbreviatons," is an NOS publication that explains the symbols and abbreviations used on nautical charts published in the U.S. It also includes many definitions and other valuable data helpful in understanding NOS nautical charts. Order from NOAA. Price: around \$3.00



I PLAN TO TRAILER MY BOAT TO A NEW VACATION SPOT THIS SUMMER. BUT I AM UNFAMILIAR WITH THE WATERWAYS THERE. WHERE CAN I FIND MORE INFORMATION ABOUT A NEW BOATING AREA?

The U.S. Coast Pilot Series gives weather summaries, climate data, navigation, channel and anchorage information, pilotage, etc. for specific coastal, intracoastal and Great Lakes waters. Revised annually. Order from NOAA. Price: under \$20.

WHAT OTHER GOVERNMENT PUBLICATIONS CAN HELP ME NAVIGATE?

Tide Tables are NOS predictions of the times and heights of high and low waters for major and minor harbors. Order from NOAA. Price: about \$7. Areas covered:

East Coast of North and South America West Coast of North and South America Europe and West Coast of Africa Central and Western Pacific, Indian Ocean

Tidal Current Tables explain predicted times, velocity, and direction of currents. There are two volumes: Atlantic Coast of North America and Pacific Coast of North America. Order from NOAA. Price: about \$6.

Light Lists are U.S. Coast Guard publications containing vital information for navigators, including fog signals, radiobeacon characteristics, daymarkers, unlighted buoys, lighted navigational aids, and loran stations. This publication should be corrected each week from the Notice to Mariners or Local Notice to Mariners as appropriate. Order from: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: \$13-\$20.

The Nautical Almanac contains astronomical data used by navigators in celestial navigation. Order from: Superintendent of Documents (same as Light Lists, above.) Price: About \$11.

Note: The above charts and government publications may be available through your local NOS dealer, or local marine retail outlet or nautical store. There are also a number of privately produced charts for popular cruising areas available through these outlets.

KEEPING ABREAST OF CHANGES ON THE WATER

On the water, things change frequently. Markers, lights, shoals, etc. may move, be changed by the Coast Guard, or even discontinued. Thus the date of a chart is of vital importance to boaters. It is not unusual for government charts to be updated only once every three or four years.

To keep your charts up to date, you can receive free the Local Notice to Mariners for your boating area. The Notice is issued weekly by each of the ten US Coast Guard Districts. It is intended for small craft owners using the intracoastal waterways, other waterways and small harbors, to keep charts and related publications up to date. It often includes temporary changes to published data that are of short duration, and which are not included in the Defense Mapping Agency Notice to Mariners. The information contained in Local Notice to Mariners includes data compiled by the National Ocean Service (NOS) and the Coast Guard which affects boating safety.

To receive Local Notice to Mariners, you must request in writing that your name be added to the mailing list for your Coast Guard District. Write to "District Commander (OAN)" for your Coast Guard District. See USCG District Office listings on page 7 for the address. No charge for this government service.

Notice to Mariners, issued weekly by the U.S. Defense Mapping Agency, is prepared jointly with the National Ocean Service (NOS) and the U.S. Coast Guard. The Notice is intended primarily for deep draft vessels. It details changes to channels, navigational aids, and other information specifically useful for updating the latest editions of nautical charts and publications produced by these agencies. Free. Order from: Defense Mapping Agency.

NOS Nautical Charts and Related Products Price List

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PLEASE NOTE: Prices are subject to change without notice



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NOAA NAUTICAL CHARTS

HOW TO ORDER NOS NAUTICAL CHARTS AND RELATED PRODUCTS: Find the product name and stock number in the chart catalog, and the current price on this list. Please provide your name, delivery address, the product name(s), stock number(s), and quantity on the Customer Order Form found in the back of the catalog or on a separate sheet of paper. Please include room or apartment number on your delivery address, and a daytime phone number should questions arise about your order. Payment must be included with your order. Remittance must be in U.S. funds, by check payable to FAA, on a U.S. bank, by international money order, or by providing VISA, MasterCard or DiscoverCard account information. All chart sales are final unless an error is made by this office in filling the order. You may FAX your order to 301-436-6829, or place an order by calling (800) 638–8972 or 301–436–8301. Send mail orders and payment to: FAA, Aeronautical Chart Distribution 6501 Lafayette Avenue, Riverdale, MD 20737-1199 Please refer to the chart catalog for further ordering information.



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Waterproof Charts + 320 Cross St Punta Gorda, FL 33950 Phone: 941-639-7626 E-Mail: Iss@Waterproofcharts.com Web: http://www.waterproofcharts.com

Yachting Vacations + 3190-B Matecumbe Key Rd Punta Gorda, FL 33955 Phone: 941-637-6634 Fax:941-637-5994

Riviera Beach

Larry Smith Electronics + 1619 Broadway Riviera Bch, FL 33404 Phone: 561-844-3592 Fax:561-844-1608

Web: http://www.marine-electronics.com

Riviera Beach

Boat Owners Warehouse 2230 Broadway US 1 Riviera Beach, FL 33404 Phone: 407-845-7777

South Daytona Beach

West Marine Products 139 + 2400 S Ridgewood Ave U S 1 S Daytona Bch, FL 32119 Phone: 904-760-0660 Fax:904-760-1135

E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

Sanibel

Sanybels Finest 1700 Periwinkle Way Sanibel, FL 33957 Phone: 941-472-6776

Sarasota

Marisafe + 7455 16th St E Sarasota, FL 34243 Phone: 941-360-1888 Fax:941-360-1648 E-Mail: Info@Marisafe.com Web: http://www.marisafe.com

Economy Tackle Inc 6018 S Tamiami Trl Sarasota, FL 34231 Phone: 813-924-2785 Fax:941-922-8842

West Marine Products 063 + 3979 S Tamiami Trl Sarasota, FL 34231 Phone: 941-924-6777 Fax:941-924-7727 E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

West Marine Products 115 + 3140 N Tamiami Trl Sarasota, FL 34234 Phone: 941-351-3431 Fax:941-351-2080 E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

St Augustine

First Mate Yacht Svcs 235 Yacht Club Dr St Augustine, FL 32095 Phone: 904-829-0184 Fax:904-824-5605

Marine Supply & Oil Co + 150 Riberia St St Augustine, FL 32084

Phone: 904-829-2271

St Marks

Shields Marina Inc 95 Riverside Dr St Marks, FL 32355 Phone: 904-925-6158 Fax:850-925-6828

St Petersburg

Marina Pt Ships Store 500 1st Ave S E St Petersburg, FL 33701 Phone: 727-823-2555 Fax:727-821-2555

Sea Soft Inc 8440 - 4th St N St Petersburg, FL 33702 Phone: 727-522-4752 Fax:727-521-4506

Coastal Waterproof Chts Inc 1445 Central Ave St Petersburg, FL 33705 Phone: 727-823-9248 Fax:727-821-5979

West Marine Products 036 + 5001 34th St S St Petersburg, FL 33711 Phone: 727-867-5700 Fax:727-867-7686

E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

West Marine Products 117 + 2000 34th St North US 19 St Petersburg, FL 33713 Phone: 727-327-0072 Fax:727-323-1643

E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

Stuart

Nautical Know How Inc + 5102 S E Nassau Ter Stuart, FL 34997 Phone: 561-283-1523 Web: http://boatsafe.com

West Marine Products 062 + 4545 S E Dixie Hwy Blvd Stuart, FL 34997 Phone: 561-223-1515 Fax:561-223-6467

E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

Boat Owners Warehouse 3355 S E Dixie Hwy Stuart, FL 33494 Phone: 407-288-4053

Tallahassee

Map Shoppe + 537-E Silver Slipper Ln Tallahassee, FL 32303 Phone: 850-385-8869 Fax:850-385-4469

Tampa

West Marine Products 118 + 3905 W Cypress St Tampa, FL 33607 Phone: 813-348-0521 Fax:813-348-0618 E-Mail: Strcustserv@Westmarine.com Web: http://www.westmarine.com

Boater's World #428 W Brandon Sq 9931 Adamo Dr E Tampa, FL 33619 Phone: 813-620-0997

Rope Warehouse & Marine Splys + 1902 Maple Ave Tampa, FL 33605 Phone: 813-223-7673 Fax:813-248-0751

Poston Marine + 601 19th St N Tampa, FL 33605 Phone: 813-229-1836

A Galaxy Of Maps Inc 6820 N Florida Ave Tampa, FL 33604 Phone: 813-237-1711 Fax:813-238-3541

A Mapsource Inc + 5712 W Waters Ave Tampa, FL 33634 Phone: 813-890-9595 Fax:813-890-9596

Tarpon Springs Sigma Marine Supplies + 3 Oscar Hill Rd Tarpon Springs, FL 34689 Phone: 727-934-0794

Fax:813-938-2646

Tavernier

Curtis Marine Inc + 229 Banyon Ln Tavernier, FL 33070 Phone: 305-852-5218

Venice

The Dome + SR 776 Venice, FL 34293 Phone: 941-408-0229 Fax:941-412-1300

Vero Beach

Vero Marine Center Inc 12 Royal Palm Blvd Vero Beach, FL 32960 Phone: 561-562-7922 E-Mail: Veromarine@Juno.com

West Palm Beach

Maps Of South Florida Inc 3161 C Meridian S West Palm Beach, FL 33410 Phone: 561-622-2337

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